# EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 952 | 536/25.4 | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:11 |
| L2 | 0 | l1 and 8-hydroxydeoxyguanosine | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:21 |
| L3 | 0 | l1 and hydroxydeoxyguanosine | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:12 |
| L4 | 94 | l1 and $deoxyguanosine | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:12 |
| L5 | 23 | l4 and (anion ADJ exchange) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:19 |
| L6 | 92 | l4 and purif$ | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:19 |
| L7 | 23 | l6 and (anion ADJ exchange) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:19 |
| L8 | 0 | l1 and (oxidati$ NEAR damaged NEAR $deoxyguanosine) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:23 |
| L9 | 0 | oxidati$ NEAR damaged NEAR $deoxyguanosine | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:23 |
| L10 | 5 | oxidati$ NEAR damaged NEAR guanine | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:24 |
| L11 | 1 | l1 and (oxidati$ NEAR damaged NEAR guanine) | US-PGPUB; USPAT; EPO; JPO; DERWENT | OR | OFF | 2006/06/13 16:24 |

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 NEWS  7  FEB 27   New STN AnaVist pricing effective March 1, 2006
 NEWS  8  MAR 03   Updates in PATDPA; addition of IPC 8 data without attributes
 NEWS  9  MAR 22   EMBASE is now updated on a daily basis
 NEWS 10  APR 03   New IPC 8 fields and IPC thesaurus added to PATDPAFULL
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 NEWS 14  APR 12   Improved structure highlighting in FQHIT and QHIT display
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 NEWS 15  APR 12   Derwent World Patents Index to be reloaded and enhanced during
                   second quarter; strategies may be affected
 NEWS 16  MAY 10   CA/CAplus enhanced with 1900-1906 U.S. patent records
 NEWS 17  MAY 11   KOREAPAT updates resume
 NEWS 18  MAY 19   Derwent World Patents Index to be reloaded and enhanced
 NEWS 19  MAY 30   IPC 8 Rolled-up Core codes added to CA/CAplus and
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 NEWS 20  MAY 30   The F-Term thesaurus is now available in CA/CAplus
 NEWS 21  JUN 02   The first reclassification of IPC codes now complete in
                   INPADOC

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                   CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
                   AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
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=> s guanine
L1      258675 GUANINE

=> s l1 and (oxidatively(a)damaged)
L2         250 L1 AND (OXIDATIVELY(A) DAMAGED)

=> s l2 and 8-hydroxyguanosine
  20 FILES SEARCHED...
L3           4 L2 AND 8-HYDROXYGUANOSINE

=> s l3 and (anion(a)exchange)
  24 FILES SEARCHED...
L4           3 L3 AND (ANION(A) EXCHANGE)

=> dis l4 1-3 bib abs

L4   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2003:737986  CAPLUS
DN   139:242537
TI   Method for purifying oxidatively damaged
     guanine nucleoside, its measuring method, and analytical apparatus
     for performing the methods
IN   Kasai, Hiroshi
PA   Japan
SO   PCT Int. Appl., 30 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    --------------------   --------
PI   WO 2003076925        A1    20030918    WO 2003-JP3007         20030313
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH,
             PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2003220877         A1    20030922    AU 2003-220877         20030313
     EP 1484609            A1    20041208    EP 2003-712682         20030313
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
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US 2005123921 A1 20050609 US 2003-507277 20030313
JP 3742814 B2 20060208 JP 2003-575099 20030313
PRAI JP 2002-70836 A 20020314
WO 2003-JP3007 W 20030313
AB A method for purifying an **oxidatively damaged guanine** nucleoside is provided, which is highly accurate, reproducible, economically advantageous and echo-friendly. Also provided are a method for measuring an **oxidatively damaged guanine** nucleoside, and an apparatus for performing these methods. The method for purifying an **oxidatively damaged guanine** nucleoside, especially, 8-hydroxydeoxyguanosine (8-OH-dG) formed by a damage to **guanine** in DNA or RNA is characterized by comprising a first purification step for purifying the **oxidatively damaged guanine** nucleoside in a sample by **anion exchange** chromatog. The method is also characterized in that **8-hydroxyguanosine** (8-OH-rGuo) is added to a sample beforehand to purify 8-OH-dG contained in the sample. The method for measuring an **oxidatively damaged guanine** nucleoside is characterized by comprising a measurement step for measuring the **oxidatively damaged guanine** nucleoside purified by the above-described purification method. Diagrams describing the apparatus assembly are given.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 3 IFIPAT COPYRIGHT 2006 IFI on STN
AN 10885202 IFIPAT;IFIUDB;IFICDB
TI METHOD OF PURIFYING OXIDATIVELY INJURED **GUANINE** NUCLEOSIDE, METHOD OF MEASURING THE SAME AND ANALYZER FOR THE EMBODIMENT THEREOF
INF Kasai; Hiroshi, Kitakyushu, JP
IN Kasai Hiroshi (JP)
PAF Unassigned
PA Unassigned Or Assigned To Individual (68000)
AG KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US
PI US 2005123921 A1 20050609
AI US 2003-507277 20030313
WO 2003-JP3007 20030313
20030313 PCT 371 date
20030313 PCT 102(e) date
PRAI JP 2002-70836 20020314
FI US 2005123921 20050609
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 13
GI 9 Figure(s).
FIG. 1 is a schematic diagram showing an embodiment of an apparatus for purifying and measuring 8-OH-dG.
FIG. 2 is a schematic diagram showing an embodiment of an apparatus for purifying and measuring 8-OH-dG.
FIG. 3 shows an example of a separation pattern of a mixture of urine, 8-OH-dG and 8-OH-rGuo, using an **anion-exchange** column (HPLC-1), showing a positional validation of the markers.
FIG. 4 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 5 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 6 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 7 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 8 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).
FIG. 9 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).
AB An object of the invention is to provide a purification method for **oxidatively damaged guanine** nucleosides having high accuracy and reproducibility, and also for which

consideration is given to economic efficiency and environmental aspects, a measuring method therefor, and an analyzer for performing such. The purification method for **oxidatively damaged guanine** nucleosides is a purification method for **oxidatively damaged guanine** nucleosides generated as a result of **guanine** damage in DNA or RNA, comprising a first purification step for purifying **oxidatively damaged guanine** nucleosides contained in a sample by **anion-exchange** chromatography. The purification method for 8OH-dG is a purification method for 8-OH-dG contained in a sample, wherein 8-OH-rGuo is previously added to the sample so as to purify it. The measuring method for **oxidatively damaged guanine** nucleosides comprises a measuring step for measuring the purified **oxidatively damaged guanine** nucleosides obtained by the purification method.

CLMN 13 9 Figure(s).

FIG. 1 is a schematic diagram showing an embodiment of an apparatus for purifying and measuring 8-OH-dG.

FIG. 2 is a schematic diagram showing an embodiment of an apparatus for purifying and measuring 8-OH-dG.

FIG. 3 shows an example of a separation pattern of a mixture of urine, 8-OH-dG and 8-OH-rGuo, using an **anion-exchange** column (HPLC-1), showing a positional validation of the markers.

FIG. 4 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).

FIG. 5 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).

FIG. 6 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).

FIG. 7 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).

FIG. 8 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).

FIG. 9 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).

L4 ANSWER 3 OF 3 USPATFULL on STN

AN 2005:144186 USPATFULL

TI Method of purifying oxidatively injured **guanine** nucleoside, method of measuring the same and analyzer for the embodiment thereof

IN Kasai, Hiroshi, Kitakyushu, JAPAN

PI US 2005123921 A1 20050609

AI US 2003-507277 A1 20030313 (10)
WO 2003-JP3007 20030313

PRAI JP 2002-70836 20020314

DT Utility

FS APPLICATION

LREP KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US

CLMN Number of Claims: 13

ECL Exemplary Claim: 1

DRWN 9 Drawing Page(s)

LN.CNT 684

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An object of the invention is to provide a purification method for **oxidatively damaged guanine** nucleosides having high accuracy and reproducibility, and also for which consideration is given to economic efficiency and environmental aspects, a measuring method therefor, and an analyzer for performing such. The purification method for **oxidatively damaged guanine** nucleosides is a purification method for **oxidatively damaged guanine** nucleosides generated as a result of **guanine** damage in DNA or RNA, comprising a first purification step for purifying **oxidatively damaged guanine** nucleosides contained in a sample by **anion-exchange** chromatography. The purification method for 8-OH-dG is a purification method for 8-OH-dG contained in a sample, wherein 8-OH-rGuo is previously added to the sample so as to purify it. The measuring method for **oxidatively damaged**

**guanine** nucleosides comprises a measuring step for measuring the purified **oxidatively damaged guanine** nucleosides obtained by the purification method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s l2 and (anion(a)exchange)
L5 4 L2 AND (ANION(A) EXCHANGE)

=> dis l5 1-4 bib abs

L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:737986 CAPLUS
DN 139:242537
TI Method for purifying **oxidatively damaged guanine** nucleoside, its measuring method, and analytical apparatus for performing the methods
IN Kasai, Hiroshi
PA Japan
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2003076925 | A1 | 20030918 | WO 2003-JP3007 | 20030313 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003220877 | A1 | 20030922 | AU 2003-220877 | 20030313 |
| EP 1484609 | A1 | 20041208 | EP 2003-712682 | 20030313 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| US 2005123921 | A1 | 20050609 | US 2003-507277 | 20030313 |
| JP 3742814 | B2 | 20060208 | JP 2003-575099 | 20030313 |
| PRAI JP 2002-70836 | A | 20020314 | | |
| WO 2003-JP3007 | W | 20030313 | | |

AB A method for purifying an **oxidatively damaged guanine** nucleoside is provided, which is highly accurate, reproducible, economically advantageous and echo-friendly. Also provided are a method for measuring an **oxidatively damaged guanine** nucleoside, and an apparatus for performing these methods. The method for purifying an **oxidatively damaged guanine** nucleoside, especially, 8-hydroxydeoxyguanosine (8-OH-dG) formed by a damage to **guanine** in DNA or RNA is characterized by comprising a first purification step for purifying the **oxidatively damaged guanine** nucleoside in a sample by **anion exchange** chromatog. The method is also characterized in that 8-hydroxyguanosine (8-OH-rGuo) is added to a sample beforehand to purify 8-OH-dG contained in the sample. The method for measuring an **oxidatively damaged guanine** nucleoside is characterized by comprising a measurement step for measuring the **oxidatively damaged guanine** nucleoside purified by the above-described purification method. Diagrams describing the apparatus assembly are given.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L5 ANSWER 2 OF 4 IFIPAT COPYRIGHT 2006 IFI on STN
AN 10885202 IFIPAT;IFIUDB;IFICDB

TI METHOD OF PURIFYING OXIDATIVELY INJURED **GUANINE** NUCLEOSIDE, METHOD OF MEASURING THE SAME AND ANALYZER FOR THE EMBODIMENT THEREOF

INF Kasai; Hiroshi, Kitakyushu, JP
IN Kasai Hiroshi (JP)
PAF Unassigned
PA Unassigned Or Assigned To Individual (68000)
AG KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US

PI US 2005123921 A1 20050609
AI US 2003-507277 20030313
WO 2003-JP3007 20030313
20030313 PCT 371 date
20030313 PCT 102(e) date
PRAI JP 2002-70836 20020314
FI US 2005123921 20050609
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 13
GI 9 Figure(s).

FIG. 1 is a schematic diagram showing an embodiment of an apparatus for purifying and measuring 8-OH-dG.

FIG. 2 is a schematic diagram showing an embodiment of an apparatus for purifying and measuring 8-OH-dG.

FIG. 3 shows an example of a separation pattern of a mixture of urine, 8-OH-dG and 8-OH-rGuo, using an **anion-exchange** column (HPLC-1), showing a positional validation of the markers.

FIG. 4 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).

FIG. 5 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).

FIG. 6 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).

FIG. 7 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).

FIG. 8 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).

FIG. 9 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).

AB An object of the invention is to provide a purification method for **oxidatively damaged guanine** nucleosides having high accuracy and reproducibility, and also for which consideration is given to economic efficiency and environmental aspects, a measuring method therefor, and an analyzer for performing such. The purification method for **oxidatively damaged guanine** nucleosides is a purification method for **oxidatively damaged guanine** nucleosides generated as a result of **guanine** damage in DNA or RNA, comprising a first purification step for purifying **oxidatively damaged guanine** nucleosides contained in a sample by **anion-exchange** chromatography. The purification method for 8OH-dG is a purification method for 8-OH-dG contained in a sample, wherein 8-OH-rGuo is previously added to the sample so as to purify it. The measuring method for **oxidatively damaged guanine** nucleosides comprises a measuring step for measuring the purified **oxidatively damaged guanine** nucleosides obtained by the purification method.

CLMN 13 9 Figure(s).

FIG. 1 is a schematic diagram showing an embodiment of an apparatus for purifying and measuring 8-OH-dG.

FIG. 2 is a schematic diagram showing an embodiment of an apparatus for purifying and measuring 8-OH-dG.

FIG. 3 shows an example of a separation pattern of a mixture of urine, 8-OH-dG and 8-OH-rGuo, using an **anion-exchange** column (HPLC-1), showing a positional validation of the markers.

FIG. 4 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).

FIG. 5 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).

FIG. 6 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 7 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 8 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).
FIG. 9 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).

L5 ANSWER 3 OF 4 USPATFULL on STN
AN 2005:144186 USPATFULL
TI Method of purifying oxidatively injured **guanine** nucleoside, method of measuring the same and analyzer for the embodiment thereof
IN Kasai, Hiroshi, Kitakyushu, JAPAN
PI US 2005123921 A1 20050609
AI US 2003-507277 A1 20030313 (10)
WO 2003-JP3007 20030313
PRAI JP 2002-70836 20020314
DT Utility
FS APPLICATION
LREP KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 684
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An object of the invention is to provide a purification method for **oxidatively damaged guanine** nucleosides having high accuracy and reproducibility, and also for which consideration is given to economic efficiency and environmental aspects, a measuring method therefor, and an analyzer for performing such. The purification method for **oxidatively damaged guanine** nucleosides is a purification method for **oxidatively damaged guanine** nucleosides generated as a result of **guanine** damage in DNA or RNA, comprising a first purification step for purifying **oxidatively damaged guanine** nucleosides contained in a sample by **anion-exchange** chromatography. The purification method for 8-OH-dG is a purification method for 8-OH-dG contained in a sample, wherein 8-OH-rGuo is previously added to the sample so as to purify it. The measuring method for **oxidatively damaged guanine** nucleosides comprises a measuring step for measuring the purified **oxidatively damaged guanine** nucleosides obtained by the purification method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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AN 2005-444632 [45] WPINDEX
DNN N2005-361374
TI Analyzing **oxidatively damaged guanine** compound, by purifying **oxidatively damaged guanine** compound obtained by damaging DNA, RNA or nucleotide, in **anion-exchange** column, and measuring oxidatively damage **guanine** compound with detector.
DC S03
IN KASAI, H
PA (KASA-I) KASAI H
CYC 108
PI WO 2005050191 A1 20050602 (200545)* JA 31
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
ADT WO 2005050191 A1 WO 2004-JP15826 20041026

PRAI JP 2004-225661 20040802; JP 2003-366220 20031027;
JP 2004-135791 20040430
AN 2005-444632 [45] WPINDEX
AB WO2005050191 A UPAB: 20050715
NOVELTY - Analyzing **oxidatively damaged guanine** compound, involves purifying **oxidatively damaged guanine** compound that is obtained by damaging DNA, RNA or nucleotide, in an **anion-exchange** column (HPLC-1), and measuring the oxidatively damage **guanine** compound with a detector.
DETAILED DESCRIPTION - Analyzing **oxidatively damaged guanine** compound, involves (a) purifying **oxidatively damaged guanine** compound that is obtained by damaging DNA, RNA or nucleo- tide, in an **anion-exchange** column (HPLC-1), and measuring the oxidatively damage **guanine** compound with a detector, (b) purify- ing **oxidatively damaged guanine** compound that is obtained by damaging DNA, RNA or nucleotide contained in a sample, in an **anion-exchange** column (HPLC-1), measuring oxidatively damage **guanine** compound with a detector and a substance correcting the concentration of **oxidatively damaged guanine**, and analyzing the concentration of **oxidatively damaged guanine** compound and the correction substance, simultaneously, (c) purifying **oxidatively damaged guanine** compound that is obtained by damaging DNA, RNA or nucleotide, in an **anion-exchange** column (HPLC-1), sensing the position of elution marker that is added to the sample, measuring the concentration of the substance correcting the concentration of **oxidatively damaged guanine**, with the detector, measuring **oxidatively damaged guanine** compound with the detector, and analyzing the concentration of **oxidatively damaged guanine** com- pound and the correction substance, simultaneously. INDEPENDENT CLAIMS are also included for the following:
(1) analyzer for analyzing **oxidatively damaged guanine** com- pound; and
(2) analysis mechanism for analyzing **oxidatively damaged guanine** compound.
USE - For analyzing **oxidatively damaged guanine** compound. The sample is urine (claimed).
ADVANTAGE - The method simultaneously analysis **oxidatively damaged guanine** compound and substance correcting the concentra- tion of the **oxidatively damaged guanine** compound, thus can be used in analysis of biological material such as urine. The ana- lyzer can be used in industry as an analytical instrument.
DESCRIPTION OF DRAWING(S) - The figure shows apparatus for analyzing 8-hydroxy deoxyguanosine, 8-hydroxy **guanine**, 7-methyl **guanine** or creatinine, simultaneously. (Drawing includes non-English language text).
valve 1 15
valve 2 16
auto sampler 17
pump 1 solution A 21
pump 2 solution B 22
pump 3 solution C 23
guard column 35
loop 36
Dwg.1/5

=> s l1 and 8-hydroxyguanosine
20 FILES SEARCHED...
L6 113 L1 AND 8-HYDROXYGUANOSINE

=> s l6 and purif?
L7 29 L6 AND PURIF?

=> s l7 and (anion(a)exchange)

L8 4 L7 AND (ANION(A) EXCHANGE)

=> dis l8 1-4 bib abs

L8 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:737986 CAPLUS
DN 139:242537
TI Method for **purifying** oxidatively damaged **guanine** nucleoside, its measuring method, and analytical apparatus for performing the methods
IN Kasai, Hiroshi
PA Japan
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2003076925 | A1 | 20030918 | WO 2003-JP3007 | 20030313 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003220877 | A1 | 20030922 | AU 2003-220877 | 20030313 |
| EP 1484609 | A1 | 20041208 | EP 2003-712682 | 20030313 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| US 2005123921 | A1 | 20050609 | US 2003-507277 | 20030313 |
| JP 3742814 | B2 | 20060208 | JP 2003-575099 | 20030313 |
| PRAI JP 2002-70836 | A | 20020314 | | |
| WO 2003-JP3007 | W | 20030313 | | |

AB A method for **purifying** an oxidatively damaged **guanine** nucleoside is provided, which is highly accurate, reproducible, economically advantageous and echo-friendly. Also provided are a method for measuring an oxidatively damaged **guanine** nucleoside, and an apparatus for performing these methods. The method for **purifying** an oxidatively damaged **guanine** nucleoside, especially, 8-hydroxydeoxyguanosine (8-OH-dG) formed by a damage to **guanine** in DNA or RNA is characterized by comprising a first **purifn**. step for **purifying** the oxidatively damaged **guanine** nucleoside in a sample by **anion exchange** chromatog. The method is also characterized in that **8-hydroxyguanosine** (8-OH-rGuo) is added to a sample beforehand to **purify** 8-OH-dG contained in the sample. The method for measuring an oxidatively damaged **guanine** nucleoside is characterized by comprising a measurement step for measuring the oxidatively damaged **guanine** nucleoside **purified** by the above-described **purifn**. method. Diagrams describing the apparatus assembly are given.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 4 IFIPAT COPYRIGHT 2006 IFI on STN
AN 10885202 IFIPAT;IFIUDB;IFICDB
TI METHOD OF **PURIFYING** OXIDATIVELY INJURED **GUANINE** NUCLEOSIDE, METHOD OF MEASURING THE SAME AND ANALYZER FOR THE EMBODIMENT THEREOF
INF Kasai; Hiroshi, Kitakyushu, JP
IN Kasai Hiroshi (JP)
PAF Unassigned
PA Unassigned Or Assigned To Individual (68000)
AG KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US

PI US 2005123921 A1 20050609
AI US 2003-507277 20030313
WO 2003-JP3007 20030313
20030313 PCT 371 date
20030313 PCT 102(e) date
PRAI JP 2002-70836 20020314
FI US 2005123921 20050609
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 13
GI 9 Figure(s).
FIG. 1 is a schematic diagram showing an embodiment of an apparatus for **purifying** and measuring 8-OH-dG.
FIG. 2 is a schematic diagram showing an embodiment of an apparatus for **purifying** and measuring 8-OH-dG.
FIG. 3 shows an example of a separation pattern of a mixture of urine, 8-OH-dG and 8-OH-rGuo, using an **anion-exchange** column (HPLC-1), showing a positional validation of the markers.
FIG. 4 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 5 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 6 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 7 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 8 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).
FIG. 9 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).

AB An object of the invention is to provide a **purification** method for oxidatively damaged **guanine** nucleosides having high accuracy and reproducibility, and also for which consideration is given to economic efficiency and environmental aspects, a measuring method therefor, and an analyzer for performing such. The **purification** method for oxidatively damaged **guanine** nucleosides is a **purification** method for oxidatively damaged **guanine** nucleosides generated as a result of **guanine** damage in DNA or RNA, comprising a first **purification** step for **purifying** oxidatively damaged **guanine** nucleosides contained in a sample by **anion-exchange** chromatography. The **purification** method for 8OH-dG is a **purification** method for 8-OH-dG contained in a sample, wherein 8-OH-rGuo is previously added to the sample so as to **purify** it. The measuring method for oxidatively damaged **guanine** nucleosides comprises a measuring step for measuring the **purified** oxidatively damaged **guanine** nucleosides obtained by the **purification** method.

CLMN 13 9 Figure(s).
FIG. 1 is a schematic diagram showing an embodiment of an apparatus for **purifying** and measuring 8-OH-dG.
FIG. 2 is a schematic diagram showing an embodiment of an apparatus for **purifying** and measuring 8-OH-dG.
FIG. 3 shows an example of a separation pattern of a mixture of urine, 8-OH-dG and 8-OH-rGuo, using an **anion-exchange** column (HPLC-1), showing a positional validation of the markers.
FIG. 4 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 5 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 6 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 7 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 8 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).
FIG. 9 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).

L8 ANSWER 3 OF 4 USPATFULL on STN
AN 2005:144186 USPATFULL
TI Method of **purifying** oxidatively injured **guanine** nucleoside, method of measuring the same and analyzer for the embodiment thereof
IN Kasai, Hiroshi, Kitakyushu, JAPAN
PI US 2005123921 A1 20050609
AI US 2003-507277 A1 20030313 (10)
WO 2003-JP3007 20030313
PRAI JP 2002-70836 20020314
DT Utility
FS APPLICATION
LREP KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 684
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An object of the invention is to provide a **purification** method for oxidatively damaged **guanine** nucleosides having high accuracy and reproducibility, and also for which consideration is given to economic efficiency and environmental aspects, a measuring method therefor, and an analyzer for performing such. The **purification** method for oxidatively damaged **guanine** nucleosides is a **purification** method for oxidatively damaged **guanine** nucleosides generated as a result of **guanine** damage in DNA or RNA, comprising a first **purification** step for **purifying** oxidatively damaged **guanine** nucleosides contained in a sample by **anion-exchange** chromatography. The **purification** method for 8-OH-dG is a **purification** method for 8-OH-dG contained in a sample, wherein 8-OH-rGuo is previously added to the sample so as to **purify** it. The measuring method for oxidatively damaged **guanine** nucleosides comprises a measuring step for measuring the **purified** oxidatively damaged **guanine** nucleosides obtained by the **purification** method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 4 USPATFULL on STN
AN 2000:161141 USPATFULL
TI Relating to mutagenesis of nucleic acids
IN Williams, David, Sheffield, United Kingdom
Brown, Daniel, Cambridge, United Kingdom
Zaccolo, Manuella Carla, Cambridge, United Kingdom
Gherardi, Ermanno, Cambridge, United Kingdom
PA Amersham Pharmacia Biotech UK Limited, Buckinghamshire, United Kingdom (non-U.S. corporation)
PI US 6153745 20001128
WO 9711083 19970327
AI US 1998-43514 19980706 (9)
WO 1996-GB2333 19960919
19980706 PCT 371 date
19980706 PCT 102(e) date
PRAI GB 1995-19425 19950922
GB 1996-2011 19960201
DT Utility
FS Granted
EXNAM Primary Examiner: Crane, L. Eric
LREP Pillsbury Madison & Sutro, LLP
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 44 Drawing Figure(s); 33 Drawing Page(s)
LN.CNT 1149
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention concerns novel compounds having defined structural formulae and methods of mutating a nucleic acid sequence, the method

comprising replicating a template sequence in the presence of a nucleoside triphosphate analogue in accordance with the invention, so as to form non-identical copies of the template sequence comprising one or more nucleoside triphosphate analogue residues, and a kit for use in performing the method of the invention. ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s 8-hydroxyguanosine
L9 676 8-HYDROXYGUANOSINE

=> s l9 and purif?
L10 76 L9 AND PURIF?

=> s l10 and (anion(a)exchange)
L11 13 L10 AND (ANION(A) EXCHANGE)

=> dis l11 1-13 bib abs

L11 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:737986 CAPLUS
DN 139:242537
TI Method for **purifying** oxidatively damaged guanine nucleoside, its measuring method, and analytical apparatus for performing the methods
IN Kasai, Hiroshi
PA Japan
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2003076925 | A1 | 20030918 | WO 2003-JP3007 | 20030313 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 2003220877 | A1 | 20030922 | AU 2003-220877 | 20030313 |
| | EP 1484609 | A1 | 20041208 | EP 2003-712682 | 20030313 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | US 2005123921 | A1 | 20050609 | US 2003-507277 | 20030313 |
| | JP 3742814 | B2 | 20060208 | JP 2003-575099 | 20030313 |
| PRAI | JP 2002-70836 | A | 20020314 | | |
| | WO 2003-JP3007 | W | 20030313 | | |

AB A method for **purifying** an oxidatively damaged guanine nucleoside is provided, which is highly accurate, reproducible, economically advantageous and echo-friendly. Also provided are a method for measuring an oxidatively damaged guanine nucleoside, and an apparatus for performing these methods. The method for **purifying** an oxidatively damaged guanine nucleoside, especially, 8-hydroxydeoxyguanosine (8-OH-dG) formed by a damage to guanine in DNA or RNA is characterized by comprising a first **purifn.** step for **purifying** the oxidatively damaged guanine nucleoside in a sample by **anion exchange** chromatog. The method is also characterized in that **8-hydroxyguanosine** (8-OH-rGuo) is added to a sample beforehand to **purify** 8-OH-dG contained in the sample. The method for measuring an oxidatively damaged guanine nucleoside is characterized by comprising a measurement step for measuring the oxidatively damaged guanine nucleoside **purified** by the above-described **purifn.** method. Diagrams describing the apparatus assembly are given.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:54786 CAPLUS
DN 118:54786
TI Novel minimum ribozymes with oxidoreduction activity: 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine isolated from Torula yeast RNA
AU Yanagawa, Hiroshi; Ogawa, Yoko; Ueno, Masako
CS Mitsubishi Kasei Inst. Life Sci., Machida, 194, Japan
SO Nucleic Acids Symposium Series (1991), 25(Symp. Nucleic Acids Chem., 18th, 1991), 113-14
CODEN: NACSD8; ISSN: 0261-3166
DT Journal
LA English
AB Three nucleosides catalyzing the oxidoredn. of NADH and K3Fe(CN)6 were isolated from Torula yeast RNA and **purified** by a series of steps: SDS-phenol extraction, nuclease P1 digestion, alkaline phosphatase digestion, **anion-exchange** chromatog., and HPLC on an ODS column. Their chemical structures were clearly determined as 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine from the results of fast-atom bombardment-mass spectrometry and 1H and 13C-NMR spectroscopies.

L11 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:506558 CAPLUS
DN 117:106558
TI Redox ribonucleosides. Isolation and characterization of 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine from Torula yeast RNA
AU Yanagawa, Hiroshi; Ogawa, Yoko; Ueno, Masako
CS Mitsubishi Kasei Inst. Life Sci., Machida, 194, Japan
SO Journal of Biological Chemistry (1992), 267(19), 13320-6
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
AB Three hydroxyribonucleosides catalyzing the oxidoredn. of NADH and K3Fe(CN)6 were **purified** from Torula yeast RNA by a series of steps including sodium dodecyl sulfate/phenol extraction, nuclease P1 digestion, alkaline phosphatase digestion, **anion-exchange** chromatog., and high performance liquid chromatog. on an ODS column. Anal. by fast atom bombardment-mass spectrometry and 1H and 13C NMR spectroscopy led to identification of the redox ribonucleosides as 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine. Their mass spectra, chromatog. behavior, UV spectra, NMR spectra, and IR spectra were identical to those from natural and synthetic sources. Oxidoredn. activities were specific for K3Fe(CN)6 as the oxidant and NADH as the reductant; and their magnitudes decreased in the order 5-hydroxycytidine, 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine. The fact that these nucleosides have redox activities suggests new functional roles for RNAs as catalysts.

L11 ANSWER 4 OF 13 IFIPAT COPYRIGHT 2006 IFI on STN
AN 10885202 IFIPAT;IFIUDB;IFICDB
TI METHOD OF **PURIFYING** OXIDATIVELY INJURED GUANINE NUCLEOSIDE, METHOD OF MEASURING THE SAME AND ANALYZER FOR THE EMBODIMENT THEREOF
INF Kasai; Hiroshi, Kitakyushu, JP
IN Kasai Hiroshi (JP)
PAF Unassigned
PA Unassigned Or Assigned To Individual (68000)
AG KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US
PI US 2005123921 A1 20050609
AI US 2003-507277 20030313
WO 2003-JP3007 20030313
20030313 PCT 371 date
20030313 PCT 102(e) date
PRAI JP 2002-70836 20020314

FI US 2005123921 20050609
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 13
GI 9 Figure(s).
FIG. 1 is a schematic diagram showing an embodiment of an apparatus for **purifying** and measuring 8-OH-dG.
FIG. 2 is a schematic diagram showing an embodiment of an apparatus for **purifying** and measuring 8-OH-dG.
FIG. 3 shows an example of a separation pattern of a mixture of urine, 8-OH-dG and 8-OH-rGuo, using an **anion-exchange** column (HPLC-1), showing a positional validation of the markers.
FIG. 4 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 5 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 6 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 7 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 8 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).
FIG. 9 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).
AB An object of the invention is to provide a **purification** method for oxidatively damaged guanine nucleosides having high accuracy and reproducibility, and also for which consideration is given to economic efficiency and environmental aspects, a measuring method therefor, and an analyzer for performing such. The **purification** method for oxidatively damaged guanine nucleosides is a **purification** method for oxidatively damaged guanine nucleosides generated as a result of guanine damage in DNA or RNA, comprising a first **purification** step for **purifying** oxidatively damaged guanine nucleosides contained in a sample by **anion-exchange** chromatography. The **purification** method for 8OH-dG is a **purification** method for 8-OH-dG contained in a sample, wherein 8-OH-rGuo is previously added to the sample so as to **purify** it. The measuring method for oxidatively damaged guanine nucleosides comprises a measuring step for measuring the **purified** oxidatively damaged guanine nucleosides obtained by the **purification** method.
CLMN 13 9 Figure(s).
FIG. 1 is a schematic diagram showing an embodiment of an apparatus for **purifying** and measuring 8-OH-dG.
FIG. 2 is a schematic diagram showing an embodiment of an apparatus for **purifying** and measuring 8-OH-dG.
FIG. 3 shows an example of a separation pattern of a mixture of urine, 8-OH-dG and 8-OH-rGuo, using an **anion-exchange** column (HPLC-1), showing a positional validation of the markers.
FIG. 4 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 5 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 6 shows an example of a separation pattern of human urine using an **anion-exchange** column (HPLC-1).
FIG. 7 shows an example of a separation pattern of human urine using a reverse phase column (HPLC-2).
FIG. 8 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).
FIG. 9 shows an example of a separation pattern of rat urine using a reverse phase column (HPLC-2).

L11 ANSWER 5 OF 13 PASCAL 
on STN
AN 1992-0531917 PASCAL
TIEN Redox ribonucleosides : isolation and characterization of 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine from Torula yeast RNA

AU YANAGAWA H.; OGAWA Y.; UENO M.
CS Mitsubishi Kasei inst. life sci., Machida, Tokyo 194, Japan
SO (The) Journal of biological chemistry, (1992), 267(19), 13320-13326, 39 refs.
ISSN: 0021-9258 CODEN: JBCHA3
DT Journal
BL Analytic
CY United States
LA English
AV INIST-3082, 354000020008430380
AB Three hydroxyribonucleosides catalyzing the oxidoreduction of NADH and K.sub.3Fe(CN).sub.6 were **purified** from ToruLa yeast RNA by a series of steps including sodium dodecyl sulfate/phenol extraction, nuclease P, digestion, alkaline phosphatase digestion, **anion-exchange** chromatography, and high performance liquid chromatography on an ODS column. Analysis by fast atom bombardment-mass spectrometry and .sup.1H and .sup.1.sup.3CNMR spectroscopy led to identification of the redox ribonucleosides as 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine

L11 ANSWER 6 OF 13 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1992:401304 SCISEARCH
GA The Genuine Article (R) Number: JB746
TI REDOX RIBONUCLEOSIDES - ISOLATION AND CHARACTERIZATION OF 5-HYDROXYURIDINE, **8-HYDROXYGUANOSINE**, AND 8-HYDROXYADENOSINE FROM TORULA YEAST RNA
AU YANAGAWA H (Reprint); OGAWA Y; UENO M
CS MITSUBISHI KASEI INST LIFE SCI, 11 MINAMIOOYA, MACHIDA, TOKYO 194, JAPAN (Reprint); TOHOKU UNIV, FAC SCI, CTR INSTRUMENTAL ANAL, SENDAI, MIYAGI 980, JAPAN
CYA JAPAN
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (5 JUL 1992) Vol. 267, No. 19, pp. 13320-13326.
ISSN: 0021-9258.
PB AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996 USA.
DT Article; Journal
LA English
REC Reference Count: 39
ED Entered STN: 1994
Last Updated on STN: 1994
*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*
AB Three hydroxyribonucleosides catalyzing the oxido-reduction of NADH and K3Fe(CN)6 were **purified** from Torula yeast RNA by a series of steps including sodium dodecyl sulfate/phenol extraction, nuclease P1 digestion, alkaline phosphatase digestion, **anion-exchange** chromatography, and high performance liquid chromatography on an ODS column. Analysis by fast atom bombardment-mass spectrometry and H-1 and C-13 NMR spectroscopy led to identification of the redox ribonucleosides as 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine. Their mass spectra, chromatographic behavior, UV spectra, NMR spectra, and IR spectra were identical to those from natural and synthetic sources. Oxidoreduction activities were specific for K3Fe(CN)6 as the oxidant and NADH as the reductant; and their magnitudes decreased in the order 5-hydroxycytidine, 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine. The fact that these nucleosides have redox activities suggests new functional roles for RNAs as catalysts.

L11 ANSWER 7 OF 13 USPATFULL on STN
AN 2005:144186 USPATFULL
TI Method of **purifying** oxidatively injured guanine nucleoside, method of measuring the same and analyzer for the embodiment thereof
IN Kasai, Hiroshi, Kitakyushu, JAPAN
PI US 2005123921 A1 20050609
AI US 2003-507277 A1 20030313 (10)
WO 2003-JP3007 20030313
PRAI JP 2002-70836 20020314

DT Utility
FS APPLICATION
LREP KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614, US
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 684
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An object of the invention is to provide a **purification** method for oxidatively damaged guanine nucleosides having high accuracy and reproducibility, and also for which consideration is given to economic efficiency and environmental aspects, a measuring method therefor, and an analyzer for performing such. The **purification** method for oxidatively damaged guanine nucleosides is a **purification** method for oxidatively damaged guanine nucleosides generated as a result of guanine damage in DNA or RNA, comprising a first **purification** step for **purifying** oxidatively damaged guanine nucleosides contained in a sample by **anion-exchange** chromatography. The **purification** method for 8-OH-dG is a **purification** method for 8-OH-dG contained in a sample, wherein 8-OH-rGuo is previously added to the sample so as to **purify** it. The measuring method for oxidatively damaged guanine nucleosides comprises a measuring step for measuring the **purified** oxidatively damaged guanine nucleosides obtained by the **purification** method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 8 OF 13 USPATFULL on STN
AN 2000:161141 USPATFULL
TI Relating to mutagenesis of nucleic acids
IN Williams, David, Sheffield, United Kingdom
Brown, Daniel, Cambridge, United Kingdom
Zaccolo, Manuella Carla, Cambridge, United Kingdom
Gherardi, Ermanno, Cambridge, United Kingdom
PA Amersham Pharmacia Biotech UK Limited, Buckinghamshire, United Kingdom (non-U.S. corporation)
PI US 6153745 20001128
WO 9711083 19970327
AI US 1998-43514 19980706 (9)
WO 1996-GB2333 19960919
19980706 PCT 371 date
19980706 PCT 102(e) date
PRAI GB 1995-19425 19950922
GB 1996-2011 19960201
DT Utility
FS Granted
EXNAM Primary Examiner: Crane, L. Eric
LREP Pillsbury Madison & Sutro, LLP
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 44 Drawing Figure(s); 33 Drawing Page(s)
LN.CNT 1149
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention concerns novel compounds having defined structural formulae and methods of mutating a nucleic acid sequence, the method comprising replicating a template sequence in the presence of a nucleoside triphosphate analogue in accordance with the invention, so as to form non-identical copies of the template sequence comprising one or more nucleoside triphosphate analogue residues, and a kit for use in performing the method of the invention. ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 9 OF 13 WPINDEX COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2003-722346 [68] WPINDEX
DNN N2003-577554 DNC C2003-198820
TI **Purification** of oxidatively injured guanosine nucleoside e.g. in

urine by **anion-exchange** chromatography to enable its measurement and quantitation by analyzer, for use in health check and disease diagnosis.

DC B04 D16 S03

IN KASAI, H

PA (KASA-I) KASAI H

CYC 103

PI WO 2003076925 A1 20030918 (200368)* JA 30
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
AU 2003220877 A1 20030922 (200431)
EP 1484609 A1 20041208 (200480) EN
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
KR 2004093694 A 20041108 (200517)
US 2005123921 A1 20050609 (200539)
JP 2003575099 X 20050707 (200545) 19
JP 3742814 B2 20060208 (200612) 14

ADT WO 2003076925 A1 WO 2003-JP3007 20030313; AU 2003220877 A1 AU 2003-220877 20030313; EP 1484609 A1 EP 2003-712682 20030313, WO 2003-JP3007 20030313; KR 2004093694 A KR 2004-711539 20040726; US 2005123921 A1 WO 2003-JP3007 20030313, US 2004-507277 20040910; JP 2003575099 X JP 2003-575099 20030313, WO 2003-JP3007 20030313; JP 3742814 B2 JP 2003-575099 20030313, WO 2003-JP3007 20030313

FDT AU 2003220877 A1 Based on WO 2003076925; EP 1484609 A1 Based on WO 2003076925; JP 2003575099 X Based on WO 2003076925; JP 3742814 B2 Based on WO 2003076925

PRAI JP 2002-70836 20020314

AN 2003-722346 [68] WPINDEX

AB WO2003076925 A UPAB: 20031022

NOVELTY - **Purification** of oxidatively injured guanosine nucleoside in DNA or RNA comprises the first **purification** step of subjecting a sample to **anion-exchange** chromatography.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a method for **purifying** 8-hydroxydeoxyguanosine (8-)H-dG) in a sample by adding **8-hydroxyguanosine** ribonucleotide (8-OH-rGuo) as internal marker before the **purification** step;

(2) a similar method for **purifying** 8-OH-dG by adding 8-OH-rGuo to a sample for **anion-exchange** chromatography as the first **purification**, and reverse-phase chromatography of the eluted 8-OH-dG-containing fraction as the second **purification**;

(3) a method for measuring an oxidatively injured guanosine nucleoside by application of any of the **purification** methods then determining the **purified** material;

(4) a method for measuring 8-OH-dG by application of any of the **purification** methods then determining the **purified** material, particularly through a time-course elution and separation with a program for control;

(5) an apparatus for **purifying** and measuring 8-OH-dG comprising an **anion-exchange** column (High Performance Liquid Chromatography-1 (HPLC-1)) for specific adsorption of 8-OH-dG in the sample and a UV (ultra-violet) detector for sensing elution position of 8-OH-rGuo, and a reverse-phase column (HPLC-2) for further **purification** of the thus pooled fraction with a detector for quantifying the pure 8-OH-dG; and

(6) a program for controlling treatment and recovery of 8-OH-dG from a sample and detecting the peak signal due to the added 8-OH-rGuo, collecting the required fraction with an output signal to open a valve for a sampler to catch the eluate, transferring the pooled fraction for further **purification** and quantification of the pure 8-OH-dG after recovery.

USE - The method is for **purifying** an oxidatively injured guanosine nucleoside e.g. in urine chromatography to enable its measurement and quantitation by analyzer, which is particularly for use in health checks and disease diagnosis.

ADVANTAGE - The method is highly accurate, reproducible, cheap and environmentally friend.

Dwg.0/9

L11 ANSWER 10 OF 13 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

AN 92245655 EMBASE

DN 1992245655

TI Redox ribonucleosides. Isolation and characterization of 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine from Torula yeast RNA.

AU Yanagawa H.; Ogawa Y.; Ueno M.

CS Mitsubishi Kasei Life Sciences Inst., 11 Minamiooya,Machida, Tokyo 194, Japan

SO Journal of Biological Chemistry, (1992) Vol. 267, No. 19, pp. 13320-13326.
.
ISSN: 0021-9258 CODEN: JBCHA3

CY United States

DT Journal; Article

FS 029 Clinical Biochemistry

LA English

SL English

ED Entered STN: 12 Sep 1992
Last Updated on STN: 12 Sep 1992

AB Three hydroxyribonucleosides catalyzing the oxido-reduction of NADH and K3Fe(CN)6 were **purified** from Torula yeast RNA by a series of steps including sodium dodecyl sulfate/phenol extraction, nuclease P1 digestion, alkaline phosphatase digestion, **anion-exchange** chromatography, and high performance liquid chromatography on an ODS column. Analysis by fast atom bombardment-mass spectrometry and 1H and 13C NMR spectroscopy led to identification of the redox ribonucleosides as 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine. Their mass spectra, chromatographic behavior, UV spectra, NMR spectra, and IR spectra were identical to those from natural and synthetic sources. Oxidoreduction activities were specific for K3Fe(CN)6 as the oxidant and NADH as the reductant; and their magnitudes decreased in the order 5-hydroxycytidine, 5-hydroxyuridine, **8- hydroxyguanosine**, and 8-hydroxyadenosine. The fact that these nucleosides have redox activities suggests new functional roles for RNAs as catalysts.

L11 ANSWER 11 OF 13 MEDLINE on STN

AN 93065245 MEDLINE

DN PubMed ID: 1842045

TI Novel minimum ribozymes with oxidoreduction activity: 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine isolated from Torula yeast RNA.

AU Yanagawa H; Ogawa Y; Ueno M

CS Mitsubishi Kasei Institute of Life Sciences, Tokyo, Japan.

SO Nucleic acids symposium series, (1991) No. 25, pp. 113-4.
Journal code: 8007206. ISSN: 0261-3166.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199212

ED Entered STN: 22 Jan 1993
Last Updated on STN: 22 Jan 1993
Entered Medline: 8 Dec 1992

AB Three nucleosides catalyzing the oxidoreduction of NADH and K3Fe(CN)6 were isolated from Torula yeast RNA and also obtained by a series of steps: SDS-phenol extraction, nuclease P1 digestion, alkaline phosphatase digestion, **anion exchange** chromatography, and HPLC on an ODS column. Their chemical structures were clearly determined as 5-hydroxyuridine, **8-hydroxyguanosine**, and

8-hydroxyadenosine from the results of FAB-MS, 1H and 13C-NMR spectroscopies.

L11 ANSWER 12 OF 13 MEDLINE on STN
AN 92317048 MEDLINE
DN PubMed ID: 1618833
TI Redox ribonucleosides. Isolation and characterization of 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine from Torula yeast RNA.
AU Yanagawa H; Ogawa Y; Ueno M
CS Mitsubishi Kasei Institute of Life Sciences, Tokyo, Japan.
SO The Journal of biological chemistry, (1992 Jul 5) Vol. 267, No. 19, pp. 13320-6.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199208
ED Entered STN: 15 Aug 1992
Last Updated on STN: 3 Feb 1997
Entered Medline: 5 Aug 1992
AB Three hydroxyribonucleosides catalyzing the oxido-reduction of NADH and K3F3(CN)6 were **purified** from Torula yeast RNA by a series of steps including sodium dodecyl sulfate/phenol extraction, nuclease P1 digestion, alkaline phosphatase digestion, **anion-exchange** chromatography, and high performance liquid chromatography on an ODS column. Analysis by fast atom bombardment-mass spectrometry and 1H and 13C NMR spectroscopy led to identification of the redox ribonucleosides as 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine. Their mass spectra, chromatographic behavior, UV spectra, NMR spectra, and IR spectra were identical to those from natural and synthetic sources. Oxidoreduction activities were specific for K3Fe(CN)6 as the oxidant and NADH as the reductant; and their magnitudes decreased in the order 5-hydroxycytidine, 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine. The fact that these nucleosides have redox activities suggests new functional roles for RNAs as catalysts.

L11 ANSWER 13 OF 13 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1992:394723 BIOSIS
DN PREV199294066898; BA94:66898
TI REDOX RIBONUCLEOSIDES ISOLATION AND CHARACTERIZATION OF 5 HYDROXYURIDINE **8 HYDROXYGUANOSINE** AND 8 HYDROXYADENOSINE FROM TORULA YEAST RNA.
AU YANAGAWA H [Reprint author]; OGAWA Y; UENO M
CS MITSUBISHI KASEI INST LIFE SCI, 11 MINAMIOOYA, MACHIDA, TOKYO 194, JPN
SO Journal of Biological Chemistry, (1992) Vol. 267, No. 19, pp. 13320-13326.
CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 24 Aug 1992
Last Updated on STN: 1 Oct 1992
AB Three hydroxyribonucleosides catalyzing the oxidoreduction of NADH and K3Fe(CN)6 were **purified** from Torula yeast RNA by a series of steps including sodium dodecyl sulfate/phenol extraction, nuclease P1 digestion, alkaline phosphatase digestion, **anion-exchange** chromatography, and high performance liquid chromatography on an ODS column. Analysis by fast atom bombardment-mass spectrometry and 1H and 13C NMR spectroscopy led to identification of the redox ribonucleosides as 5-hydroxyuridine, **8-hydroxyguanosine**, and 8-hydroxyadenosine. Their mass spectra, chromatographic behavior, UV spectra, NMR spectra, and IR spectra were identical to those from natural and synthetic sources. Oxidoreduction activities were specific for K3Fe(CN)6 as the oxidant and NADH as the reductant; and their magnitudes decreased in the order 5-hydroxycytidine, 5-hydroxyuridine, 8-hydroxy-guanosine, and 8-hydroxyadenosine. The fact

that these nucleosides have redox activities suggests new functional roles for RNAs as catalysts.

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                                                       ENTRY    SESSION
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FILE LAST UPDATED: 12 Jun 2006  (20060612/ED)

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=> s Kasai Hiroshi/AU
L12         313 KASAI HIROSHI/AU

=> s l12 and 8-hydroxyguanosine
       2705811 8
            125 HYDROXYGUANOSINE
              1 HYDROXYGUANOSINES
            125 HYDROXYGUANOSINE
                  (HYDROXYGUANOSINE OR HYDROXYGUANOSINES)
            108 8-HYDROXYGUANOSINE
                  (8(W)HYDROXYGUANOSINE)
L13           3 L12 AND 8-HYDROXYGUANOSINE

=> dis l13 1-3 bib abs

L13  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2003:737986  CAPLUS
DN   139:242537
TI   Method for purifying oxidatively damaged guanine nucleoside, its measuring
     method, and analytical apparatus for performing the methods
IN   Kasai, Hiroshi
PA   Japan
SO   PCT Int. Appl., 30 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
PI   WO 2003076925         A1    20030918    WO 2003-JP3007          20030313
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS,
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

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|---|---|---|---|---|---|
| AU | 2003220877 | A1 | 20030922 | AU 2003-220877 | 20030313 |
| EP | 1484609 | A1 | 20041208 | EP 2003-712682 | 20030313 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| US | 2005123921 | A1 | 20050609 | US 2003-507277 | 20030313 |
| JP | 3742814 | B2 | 20060208 | JP 2003-575099 | 20030313 |
| PRAI JP | 2002-70836 | A | 20020314 | | |
| WO | 2003-JP3007 | W | 20030313 | | |

AB A method for purifying an oxidatively damaged guanine nucleoside is provided, which is highly accurate, reproducible, economically advantageous and echo-friendly. Also provided are a method for measuring an oxidatively damaged guanine nucleoside, and an apparatus for performing these methods. The method for purifying an oxidatively damaged guanine nucleoside, especially, 8-hydroxydeoxyguanosine (8-OH-dG) formed by a damage to guanine in DNA or RNA is characterized by comprising a first purification step for purifying the oxidatively damaged guanine nucleoside in a sample by anion exchange chromatog. The method is also characterized in that **8-hydroxyguanosine** (8-OH-rGuo) is added to a sample beforehand to purify 8-OH-dG contained in the sample. The method for measuring an oxidatively damaged guanine nucleoside is characterized by comprising a measurement step for measuring the oxidatively damaged guanine nucleoside purified by the above-described purification method. Diagrams describing the apparatus assembly are given.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:674982 CAPLUS
DN 140:249426
TI A new automated method to analyze urinary 8-hydroxydeoxyguanosine by a high-performance liquid chromatography-electrochemical detector system
AU **Kasai, Hiroshi**
CS Department of Environmental Oncology, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Yahatanishi-ku, Kitakyushu, 807-8555, Japan
SO Journal of Radiation Research (2003), 44(2), 185-189
CODEN: JRARAX; ISSN: 0449-3060
PB Japan Radiation Research Society
DT Journal
LA English
AB A new method was developed to analyze urinary 8-hydroxydeoxyguanosine (8-OH-dG) by HPLC coupled to an electrochem. detector (ECD). This method is unique because (1) urine is first fractionated by anion-exchange chromatog. (polystyrene-type resin with quaternary ammonium group, sulfate form) before anal. by reversed-phase chromatog.; and (2) the 8-OH-dG fraction in the first HPLC is precisely and automatically collected based on the added ribonucleoside **8-hydroxyguanosine** marker peak, which elutes 4-5 min earlier. Up to 1000 human urine samples can be continuously analyzed with high accuracy within a few months. This method will be useful for studies in radiotherapy, mol. epidemiol., risk assessment, and health promotion.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:782773 CAPLUS
DN 133:346763
TI Method for measuring oxidative DNA damage products by liquid column chromatography
IN **Kasai, Hiroshi**
PA Sumitomo Pharmaceuticals Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2000310625 | A2 | 20001107 | JP 1999-121352 | 19990428 |

PRAI JP 1999-121352 19990428

AB A convenient and highly sensitive method is provided for measuring the urinary oxidative DNA damage products (e.g., **8-hydroxyguanosine**, 8-hydroxyguanine) or carcinogen-DNA adducts generated by oxidative DNA damage by liquid column chromatog. The method comprises a process for obtaining the fraction containing oxidative DNA damage products or carcinogen-DNA adducts by fractionating a urine sample through a gel filtration column (multi-mode) possessing the characteristics of a reversed phase column and an ion exchange column, a process for applying this fraction to a reversed phase column, and a process for measuring the quantity of the oxidative DNA damage products or carcinogen-DNA adducts in the eluate from the reversed phase column.

=> dis hist

(FILE 'HOME' ENTERED AT 16:26:15 ON 13 JUN 2006)

FILE 'APOLLIT, BABS, CAPLUS, CBNB, CIN, COMPENDEX, DISSABS, EMA, IFIPAT, JICST-EPLUS, NTIS, PASCAL, PROMT, RAPRA, SCISEARCH, TEXTILETECH, USPATFULL, USPAT2, WPIFV, WPINDEX, WSCA, WTEXTILES, EMBASE, MEDLINE, BIOSIS' ENTERED AT 16:26:36 ON 13 JUN 2006

L1 258675 S GUANINE
L2 250 S L1 AND (OXIDATIVELY(A)DAMAGED)
L3 4 S L2 AND 8-HYDROXYGUANOSINE
L4 3 S L3 AND (ANION(A)EXCHANGE)
L5 4 S L2 AND (ANION(A)EXCHANGE)
L6 113 S L1 AND 8-HYDROXYGUANOSINE
L7 29 S L6 AND PURIF?
L8 4 S L7 AND (ANION(A)EXCHANGE)
L9 676 S 8-HYDROXYGUANOSINE
L10 76 S L9 AND PURIF?
L11 13 S L10 AND (ANION(A)EXCHANGE)

FILE 'CAPLUS' ENTERED AT 16:35:50 ON 13 JUN 2006
L12 313 S KASAI HIROSHI/AU
L13 3 S L12 AND 8-HYDROXYGUANOSINE